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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,806	02/08/2002	Hu Yang	2039.011000/RFE (PI-21014)	3658

23720 7590 09/11/2003

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EXAMINER

MCCLENDON, SANZA L

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 09/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/072,806

Applicant(s)

YANG ET AL.

Examiner

Sanza L McClendon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,11,13-19,21-23,26,27,29-31 and 34-39 is/are rejected.
- 7) ☒ Claim(s) 2,9,10,12,20,24,25,28,32,33 and 40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4/1/02.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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DETAILED ACTION

*Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims are rejected under 35 U.S.C. 102(b) as anticipated by Katsumoto et al (6,139,770).

Katsumoto et al teaches photoinitiators and oxygen scavenging compositions useful in packaging material for food products—see abstract and background information. Said compositions can be used in films, multi-phase compositions, multi-layer films, and articles coatings, moldings, strip/ribbons, patches, bottle cap inserts, and molded or thermoformed shapes that need oxygen scavenging properties—see column 2, lines 22-25 and column 9, lines 48-50. This appears to anticipate the products of claims 29-30. Said composition comprises oxygen scavenging material, a photoinitiator, and at least one catalyst. This appears to anticipate claim 1. Said oxygen-scavenging material can be selected from the list in column 7, lines 1-23, wherein poly (ethylene-methyl acrylate-tetrahydrofurfuryl acrylate) is taught. This appears to anticipate the polymer of claim 1, wherein the tetrahydrofurfuryl acrylate will provide the structural formula found in claim 1. Said catalyst can be a transition metal salt, wherein the preferred are cobalt salts, such as cobalt oleate, cobalt linoleate, cobalt neodecanoate, cobalt stearate, and cobalt caprylate. These appear to anticipate claims 3-5, 13-15, and 34-36. Said

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photoinitiator is a benzophenone derivative containing at least two benzophenone moieties and has the general formula found in column 3, lines 15-20. This formula and corresponding definitions appears to anticipate claims 7-8, 17-18, and 37-38. Said photoinitiators taught by Katsumoto et al have strong UV absorption at about 200 to 400 nm. This appears to anticipate claims 6 and 16. Said compositions can be activated using actinic radiation, such as ultraviolet or visible light having wavelengths in the regions from 200 nm to 750 nm or electron beam, gamma, x-ray radiation and corona discharge. This appears to anticipate the method claims 31 and 39. Said compositions can optionally comprise diluent polymers, such as those listed in column 8, lines 46-52 to provide desired characteristics and additives, such as antioxidants. Said additives appear to anticipate claim 19 and said diluent polymers, such as poly vinyl chloride appear to anticipate claim 21. Said compositions can be used in multi-layered systems that comprise barrier layers, such as oxygen barrier layers. Said oxygen barrier layers can comprise polymers layers such as those listed in column 9, lines 20-25. These appear to anticipate claims 22-23. Additional layers such as adhesive layers can be included.

Katsumoto et al teaches in the film preparation example in column 11 a carrier layer made of polyethylene. This carrier layer appears to anticipate claims 26-27.

*Allowable Subject Matter*

3. Claims 2, 9-10, 12, 20, 24-25, 28, 32-33 and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to teach oxygen scavenging compositions, packaging materials or methods of making oxygen scavenging compositions and/or

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articles wherein tetrahydrofurfuryl acrylate is a substantial component in the compositions and/or articles.

*Conclusion*

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L McClendon whose telephone number is (703) 305-0505. The examiner can normally be reached on Monday through Friday 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

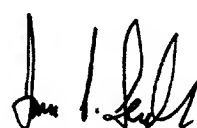
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0657.

Sanza L McClendon

Examiner

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SMc

  
James J. Seidleck  
Supervisory Patent Examiner  
Technology Center 1700